

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	48	("6253208" "6449657" "5944793" "6023684" "6226635" "6226635" "6131118" "6278993" "6591266" "6173279" "6282281" "6466570" "6173310" "6260050" "6269393" "6353825" "5729689" "6112279" "6049821" "6012067" "6338082" "6418448" "6442549" "6732117" "6480508" "6154766" "6122627" "6134540" "6226637" "6226637" "6477527" "6381627" "5907837" "5918017" "5794232" "5999973" "6169992" "6144958" "6148296" "6460043" "6654749" "6185567" "6014660" "6058429" "6732105" "6789073" "6836769" "6411966" "5423037" "5555404").pn.	US-PGPUB; USPAT; EPO	OR	OFF	2005/01/25 12:10
L2	0	1 and quadtree	US-PGPUB; USPAT; EPO	OR	OFF	2005/01/25 12:08
L3	16	1 and optimiz\$4	US-PGPUB; USPAT; EPO	OR	OFF	2005/01/25 12:09
L4	0	1 and query near3 conered	US-PGPUB; USPAT; EPO	OR	OFF	2005/01/25 12:10
L5	0	1 and query near3 covered	US-PGPUB; USPAT; EPO	OR	OFF	2005/01/25 12:10
L6	47	1 and query near3area	US-PGPUB; USPAT; EPO	OR	OFF	2005/01/25 12:10
L7	2	1 and query near3 area	US-PGPUB; USPAT; EPO	OR	OFF	2005/01/25 12:10



# ***STIC Search Report***

## ***EIC 2100***

**STIC Database Tracking Number: 143114**

**TO: Susan F Rayyan**  
**Location: rnd 3c05**  
**Art Unit : 2167**  
**Tuesday, January 25, 2005**

**Case Serial Number: 10/022788**

**From: David Holloway**  
**Location: EIC 2100**  
**RND 4B19**  
**Phone: 2-3528**

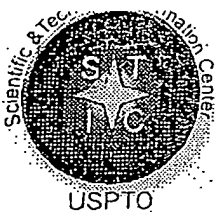
**david.holloway@uspto.gov**

### **Search Notes**

Dear Examiner Rayyan,

Attached please find your search results for above-referenced case.  
Please contact me if you have any questions or would like a re-focused search.

David



# STIC EIC 2100 Search Request Form

143114

Today's Date:

Jan 25, 2005

What date would you like to use to limit the search?

Priority Date: 12/17/01 Other: AT&T

Name Susan Bayyan

Format for Search Results (Circle One):

PAPER DISK EMAIL

Where have you searched so far?

USP DWPI EPO JPO ACM IBM TDB

IEEE INSPEC SPI Other \_\_\_\_\_

AU 2167 Examiner # 72889

Room # 3C-05 Phone 24117

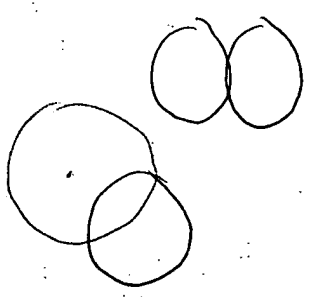
Serial # 101 022, 788

Is this a "Fast & Focused" Search Request? (Circle One) YES NO

A "Fast & Focused" Search is completed in 2-3 hours (maximum). The search must be on a very specific topic and meet certain criteria. The criteria are posted in EIC2100 and on the EIC2100 NPL Web Page at <http://ptoweb/patents/stic/stic-ic2100.htm>.

What is the topic, novelty, motivation, utility, or other specific details defining the desired focus of this search? Please include the concepts, synonyms, keywords, acronyms, definitions, strategies, and anything else that helps to describe the topic. Please attach a copy of the abstract, background, brief summary, pertinent claims and any citations of relevant art you have found.

Query generation: uses special data structure to track which parts of a region has been searched by previous query. coverage information is used to determine where to perform next query to minimize overlap.



Inventor: Simon Byers  
AT&T

priority

Venn diagram  
quadtree

uncovered quadtree  
node

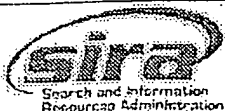
Keywords: geographic queries  
query coverage  
optimize queries  
minimize overlaps  
special data structures

STIC Searcher David Holloway

Phone 2-3528

Date picked up 1-25-05

Date Completed 1-25-05



DIAC 06

www

Set	Items	Description
S1	1560177	QUERY OR QUERIES OR SEARCH? OR SEEK? OR FIND OR LOCATE OR - LOCATING
S2	916074	DATAPOINT? OR CENTROID? OR DATA() (CENTER? OR NEXUS OR FOCUS OR FOCII) OR POINT?
S3	589817	RADIUS OR RADII OR CIRCUMFERENCE? OR DIAMETER? OR BOUNDARY OR BOUNDARIES
S4	1313435	COVERAGE? OR AREA? OR COVERED OR ENCOMPASS? OR ENCIRCL? OR WITHIN OR INSIDE
S5	165616	OVERLAP? OR OVER() (LAP OR LAPS OR LAPPING OR LAY OR LIE OR LYING OR LAYS)
S6	344	VORONOI OR DIRICHLET OR THIESSEN DELAUNAY
S7	1081322	GEOGRAPH? OR SPATIAL? OR SPACIAL? OR SPACE? OR AREA OR ARE- AS OR GRAPH OR GRAPHS OR VISUALI?
S8	142	S1(S)S2(S)S3(S)S4(S)S5(S)S7
S9	19	S1(10N)S2(10N)S3(10N)S4(10N)S5
S10	418	S1(5N)S7(10N)S4(10N)S5
S11	2	S10 AND S6
S12	142	S10(S) (S2 OR S3)
S13	269	S8 OR S9 OR S11 OR S12
S14	62	S13 AND IC=(G06F? OR H04L?)
S15	49	S14 NOT AD>20011217
S16	21	S15 AND IC=(G06F-007? OR G06F-017? OR H04L-012?)
S17	21	IDPAT (sorted in duplicate/non-duplicate order)
S18	21	IDPAT (primary/non-duplicate records only)

File 348:EUROPEAN PATENTS 1978-2005/Jan W03

(c) 2005 European Patent Office

File 349:PCT FULLTEXT 1979-2002/UB=20050120,UT=20050113

(c) 2005 WIPO/Univentio

18/3,K/1 (Item 1 from file: 348)  
DIALOG(R)File 348:EUROPEAN PATENTS  
(c) 2005 European Patent Office. All rts. reserv.

01660515

System and method for storing geographic data on a physical storage medium  
Vorrichtung und Verfahren zum Speichern von geographischen Daten auf einem  
physikalischen Speichermedium

Dispositif et methode pour la memorisation de donnees geographiques sur un  
support de memoire physique

PATENT ASSIGNEE:

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Suite 900, Chicago, Illinois 60654, (US), (Applicant designated States:  
all)

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PATENT (CC, No, Kind, Date): EP 1365212 A1 031126 (Basic)

APPLICATION (CC, No, Date): EP 2003077520 971024;

PRIORITY (CC, No, Date): US 740295 961025

DESIGNATED STATES: AT; BE; CH; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU;  
MC; NL; PT; SE

RELATED PARENT NUMBER(S) - PN (AN):

EP 838663 (EP 97308527)

INTERNATIONAL PATENT CLASS: G01C-021/32; G01C-021/20; G08G-001/0968;

G09B-029/10; **G06F-017/30** ; G08G-001/0969

ABSTRACT WORD COUNT: 321

NOTE:

Figure number on first page: NONE

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
----------------	----------	--------	------------

CLAIMS A	(English)	200348	1516
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SPEC A	(English)	200348	31166
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Total word count - document A	32682
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Total word count - document B	0
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Total word count - documents A + B	32682
------------------------------------	-------

...INTERNATIONAL PATENT CLASS: **G06F-017/30**

...SPECIFICATION needed for map display intersects a small part of a  
cartographic parcel. Because the data **within** the parcel are organized  
into cells, only the data contained in the two cells intersecting the map  
display **area** need be examined. The cells **overlapping** a given  
rectangle can be found by **searching** a kd-tree internal to the  
cartographic parcel, each of whose leaf nodes represents a...

...interval of polyline records, a contiguous interval of polygon records,  
and a contiguous interval of **point** records.

FIG. 11B illustrates an internal kd-tree entry for a cartographic  
parcel. Cuts for...

18/3,K/2 (Item 2 from file: 348)  
DIALOG(R)File 348:EUROPEAN PATENTS  
(c) 2005 European Patent Office. All rts. reserv.

01583922

X.500 System and methods providing data tolerance

X.500-Systeme und entsprechende Methoden mit Bereitstellung einer  
Datentoleranz

Systeme et procede de X.500 fournissant tolerance de donnees

PATENT ASSIGNEE:

Computer Associates Think, Inc., (2947530), One Computer Associates Plaza  
, Islandia, New York 11749, (US), (Applicant designated States: all)

INVENTOR:

Harvey, Richard Hans, 4 Odette Court, Ringwood, VIC 3134, (AU)

LEGAL REPRESENTATIVE:

Dunlop, Hugh Christopher et al (59552), R G C Jenkins &Co., 26 Caxton  
Street, London SW1H 0RJ, (GB)

PATENT (CC, No, Kind, Date): EP 1313039 A2 030521 (Basic)

APPLICATION (CC, No, Date): EP 2003002798 950830;

PRIORITY (CC, No, Date): AU 94PM7842 940901; AU 94PM9586 941121

DESIGNATED STATES: AT; BE; CH; DE; DK; ES; FR; GB; GR; IE; IT; LI; LU; MC;  
NL; PT; SE

RELATED PARENT NUMBER(S) - PN (AN):

EP 777883 (EP 95930331)

INTERNATIONAL PATENT CLASS: G06F-017/30

ABSTRACT WORD COUNT: 77

NOTE:

Figure number on first page: 2A

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200321	914
SPEC A	(English)	200321	13148
Total word count - document A			14062
Total word count - document B			0
Total word count - documents A + B			14062

INTERNATIONAL PATENT CLASS: G06F-017/30

...SPECIFICATION PATH of the selected object.

\* For each alias discovered, check to see if the alias **points** outside  
the current subtree and if it does repeat the previous step. Once all  
aliases have been resolved, a set of unique base objects will have been  
found (with no **overlapping areas** ).

\* Using the **Search** and Tree Tables, apply the filter (attribute/value  
conditions) and the scope (PATH LIKE PATH...

18/3,K/7 (Item 7 from file: 348)  
DIALOG(R)File 348:EUROPEAN PATENTS  
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01042597

Method and means of matching documents based on spatial region layout  
Verfahren und Mittel um Dokumente zu Vergleichen auf der Basis des  
raumlichen Layouts

Methode et moyens pour la comparaison de documents basee sur la disposition  
spatiale des regions

PATENT ASSIGNEE:

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INVENTOR:

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LEGAL REPRESENTATIVE:

Grunecker, Kinkeldey, Stockmair & Schwanhausser Anwaltssozietat (100721)  
, Maximilianstrasse 58, 80538 Munchen, (DE)

PATENT (CC, No, Kind, Date): EP 923044 A2 990616 (Basic)  
EP 923044 A3 010627  
EP 923044 B1 031217

APPLICATION (CC, No, Date): EP 98121791 981116;

PRIORITY (CC, No, Date): US 975466 971121

DESIGNATED STATES: DE; FR; GB

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS: G06K-009/20; G06F-017/30

ABSTRACT WORD COUNT: 133

NOTE:

Figure number on first page: 3A

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	199924	396
CLAIMS B	(English)	200351	583
CLAIMS B	(German)	200351	565
CLAIMS B	(French)	200351	666
SPEC A	(English)	199924	3427
SPEC B	(English)	200351	3664
Total word count - document A			3824
Total word count - document B			5478
Total word count - documents A + B			9302

...INTERNATIONAL PATENT CLASS: G06F-017/30

...SPECIFICATION V(M,I) where (intersection) and (union or logical sum) are  
done over the region **areas** .

The above formula accounts for the extent of match as measured by the  
extent of **spatial overlap** of corresponding regions, and the extent of  
mismatch as measured by the **areas** of regions that do not **find** the  
match (included in the denominator term).

C. Examples

Referring to Figure 4, a flow...

...SPECIFICATION onto the object I to give the projected rectangular  
regionl R'i)) as follows. The **centroid** of the region CMi)) is moved to  
the position Verification is then done by seeing...

...V(M,I) where (intersection) and (union or logical sum) are done over the  
region **areas** .

The above formula accounts for the extent of match as measured by the  
extent of **spatial overlap** of corresponding regions, and the extent of  
mismatch as measured by the **areas** of regions that do not **find** the  
match (included in the denominator term).

C. Examples

Referring to Figure 4, a flow...



18/3,K/10 (Item 10 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
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00929775 \*\*Image available\*\*

UNIFIED GEOGRAPHIC DATABASE AND METOD OF CREATING, MAINTAINING AND USING  
THE SAME

BASE DE DONNEES GEOGRAPHIQUE UNIFIEE ET PROCEDE DE CREATION, D'ENTRETIEN ET  
D'UTILISATION DE CETTE DERNIERE

Patent Applicant/Assignee:

GO2 SYSTEMS INC, 18400 Von Karman Avenue, 9th Floor, Irvine, CA 92612, US

Inventor(s):

HANCOCK Lee S, 4 Hampshire Court, Newport Beach, CA 92660, US,  
HASTINGS Jordan, 55 Hitchcock Way, #200, Santa Barbara, CA 93105, US,  
MORRISON Scott D, 24111 Castilla Lane, Mission Viejo, CA 92691, US,

Legal Representative:

FARSHAD Farjami (agent), Farjami & Farjami LLP, 16148 Sand Canyon,  
Irvine, CA 92618, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200263853 A2-A3 20020815 (WO 0263853)

Application: WO 2001US50085 20011018 (PCT/WO US01050085)

Priority Application: US 2000707213 20001103

Designated States:

(Protection type is "patent" unless otherwise stated - for applications  
prior to 2004)

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE  
ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT  
LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM  
TR TT TZ UA UG UZ VN YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 27715

Main International Patent Class: H04L-029/12

International Patent Class: G06F-017/30

Fulltext Availability:

Detailed Description

Detailed Description

... square and all of the same size, e.g., 100 kin X 100 kni, with  
**overlapping** portions of districts nested with each other. However, in  
alternative embodiments, sparsely populated **areas** may have larger  
districts, and densely populated **areas** may have smaller districts. The  
districts may also be quasi-rectangular, following latitude and longitude  
lines. In more densely populated **areas**, it is possible that a  
particular location will be **within** the **boundaries** of two or more  
districts. In addition, user-defined districts, reference **points**, and  
grid sizes are possible. For example, a **search** and rescue operation may  
establish a reference **point** and grid size convenient for a D particular  
**search area**, or a group of hikers may choose a reference **point** and  
grid size appropriate for a particular outing.

After the districts have been selected and...

...the WGRS and the domainname like addressing system based on the same  
allows multi-precision **searches** to be performed. The issue of increased  
resolution is discussed below.

Also, it is likely that there will be an **overlap area** 13 that is  
formed at the intersection of districts. Within this overlap area 13, any  
...

...the preferred embodiment, a locational. system can provide a locational

address relative to any reference **point** or district by simply toggling between reference **points** . Although the grids 1, 3 are shown at an angle relative to one another, the...

18/3,K/12 (Item 12 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
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00883988 \*\*Image available\*\*

CONTINUOUS LOCAL INFORMATION DELIVERY SYSTEM AND METHOD  
SYSTEME FOURNISSANT DES INFORMATIONS LOCALES EN CONTINU ET PROCEDE ASSOCIE

Inventor(s):

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Patent Applicant/Inventor:

CHANG Ting-Mao, 2126 Villanova Road, San Jose, CA 95130, US, US  
(Residence), US (Nationality)

Legal Representative:

CHANG Ting-Mao (commercial rep.), 2126 Villanova Road, San Jose, CA 95130  
, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200217141 A2-A3 20020228 (WO 0217141)

Application: WO 2001US26296 20010821 (PCT/WO US0126296)

Priority Application: US 2000227454 20000823

Designated States:

(Protection type is "patent" unless otherwise stated - for applications  
prior to 2004)

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ  
EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR  
LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL  
TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 14373

Main International Patent Class: G06F-017/30

Fulltext Availability:

Detailed Description

Detailed Description

... automatic positioning system. The search topic of each query is the  
same, but the search **area** is moving according to user's position. A  
circular search area is a good choice...

...at the position of the car or user and the user may pre-select a **search**  
radius. Depending on the speed of the car and the radius, two or more  
continuous **search** circles may **overlap** each other.

In Fig 3, a **searching** task does a **search** within area 301 and then  
another **search** within **area** 302 after a period of time has passed. The  
user may receive updated information related to the **overlapped area**  
303 if the information changes between two **searches**. The preferred  
embodiment of the present invention can remove the old **search** results  
on the **overlapped area** and update with the latest **search** results.  
If the user prefers to keep the old **search** result, the invention could  
present all the **search** results according to the received time of each  
search result. For example, present the latest...information search  
quality. In Fig 4, a car is moving out of user-specified search **area**  
before the next query returns the search results. It makes the first  
search at 401...

...area 403, which was missed by both queries. However, too much overlap in  
the search **areas** causes too much redundancy and too little **search**  
**area** coverage causes poor **search** quality. The preferred embodiment of  
the invention could use a predefined **search area** system that  
minimizes the **overlap** between **searches areas**, for example  
pre-selected discrete **areas**, like malls, continuous square grids, or  
continuous pentagonal cells. A **search** task then invokes a **search**  
activity when the user approaches or reaches the boundary of the already  
covered **geographic area**. Giving each search **area** in a predefined

searching area system an identifier, all search area definitions in a query could be replaced with identifiers and an identifier for the predefined search area system. If the server already knows which predefined search area system is being using, the...the driver makes a right turn on 1103 and the subsystem instantly generates a new searching area, tile 1101. Since tile 1101 is a bit overlapped with tile 1100, the query synthesis subsystem will generate the following query instruction as the new query.

1. Topic: five cheapest gasoline sale
2. Search Area : tile 1 1 01 - tile 1 1 00
3. Tile 1101: rectangle at coordinates 55' ...using the predefined search area system or not. If the user chose the predefined search area system, step 6 finds a predefined search area according to the current moving condition or...

...covers the future travel route, which could be a predefined travel route. After getting the search area, step 8 gets the constraints from the dynamic constraint subsystem to further adjust the search area. Step 9 checks the previous search area for overlapped with the current search area. If there is an overlap, the query synthesis subsystem synthesizes a new search area by excluding the previous search areas at step 10. Step 11 sets the final search area to the event. Then, step 12 starts the process to estimate the event trigger condition...

...13 calculates the buffer time  $T_b$ . The distance from user's current position to the boundary of the final search area or the boundary of current covered search area is  $L_r$ . The buffer time is  $L_r$  divided by the ...

...the event. For example, the trigger zone is  $V * T_t$  wide surrounding belt area around the boundary final search area. After setting the trigger condition, continue to step ④ of Fig 19 to...

18/3,K/19 (Item 19 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
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00562135 \*\*Image available\*\*

A METHOD AND APPARATUS OF EXPANDING WEB SEARCHING CAPABILITIES  
PROCEDE ET APPAREIL D'EXTENSION DES CAPACITES DE RECHERCHE SUR LE WEB

Patent Applicant/Assignee:

VICINITY CORPORATION,

Inventor(s):

HIMMELSTEIN Martin W,

ASPINWALL Dwight,

HALSTEAD Gerald F,

GOLDENSHER Charles,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200025508 A1 20000504 (WO 0025508)

Application: WO 99US23772 19991011 (PCT/WO US9923772)

Priority Application: US 98182746 19981028

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB  
GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA  
MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA  
UG UZ VN YU ZA ZW GH GM KE LS MW SD SL SZ TZ UG ZW AM AZ BY KG KZ MD RU  
TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG  
CI CM GA GN GW ML MR NE SN TD TG

Publication Language: English

Fulltext Word Count: 8460

...International Patent Class: G06F-017/00 ...

... G06F-017/30 ...

... G06F-017/60

Fulltext Availability:

Detailed Description

Detailed Description

... and a distance

of 50 miles. The area key producer 26 may first generate a **point** (textual) key for the partial address "Monterey, California." Inasmuch as no complete street address has been specified, the area key producer may select an arbitrary **point** within Monterey, California, or, for example, choose the location of the town's center and generate a corresponding **point** key. Based on this **point** key, area keys will be produced for a set of area keys that cover a 50 mile **radius** circle surrounding that **point** key. Alternatively, an area key that includes Monterey within its area may be used as...

...square, rectangle, triangle, etc.) may be used instead of a circle.

Again, the selection of **area** keys may result in an overinclusive set.

Figure 3 shows **area** keys selection in one embodiment of the invention. An origin **point** with a fifty mile **radius** circle is shown.

The quads **overlapping**, or intersecting, the circle would comprise the set of **area** keys used in this **search**. In this case, the set of **area** keys could be Q0313, Q0331, Q1202, and Q1220. Because a relatively small part of quads Q0331, Q1202, and Q1220 is **covered**, a better fit may be derived by subdividing those quads and using the set Q0313...modified by specifying that the any documents must have had one of a set of **area** keys saved for them at index time. That set of **area** keys represent the **areas** that fully tile (and **overlap**) the predetermined region (e.g., circle) defined by the **search** center (and the radius).

One embodiment of a process to find the set of area keys that overlap that circle includes the following operations performed by the area key generator.

First, the area key generator converts center coordinates and the radius to the same units, if not already expressed as such. Then, area key generator chooses a length for the area keys to be returned. This number can be table driven based on the radius desired. The larger the radius, the shorter the desired area key length.

Next, area key generator calculates a bounding box...

Set	Items	Description
S1	366263	QUERY OR QUERIES OR SEARCH? OR SEEK? OR FIND OR LOCATE OR - LOCATING
S2	1081765	DATAPOINT? OR DATA() (CENTER? OR NEXUS OR FOCUS OR FOCII) OR POINT?
S3	993434	RADIUS OR RADII OR CIRCUMFERENCE? OR DIAMETER? OR BOUNDARY OR BOUNDARIES
S4	3193297	COVERAGE? OR AREA? OR COVERED OR ENCOMPASS? OR ENCIRCL? OR WITHIN OR INSIDE
S5	173248	OVERLAP? OR OVER() (LAP OR LAPS OR LAY OR LIE OR LAYS)
S6	99	VORONOI OR DIRICHLET OR THIESSEN DELAUNAY
S7	44069	S1 AND (S2 OR CENTER OR CENTROID?)
S8	1136	S7 AND S3 AND S4
S9	36	S8 AND S5
S10	11	S1 AND S6
S11	47	S9 OR S10
S12	37	S11 NOT AD>20011217
S13	11	S12 AND IC=(G06F? OR H04L?)
S14	173543	S5 OR OVER()LAPPING
S15	1427	S14 AND S4 AND S1
S16	317	S15 AND (S2 OR S3)
S17	107049	MC=(T01-N02A3B OR T01-N02A3C OR T01-S03 OR W01-A06G)
S18	10	S17 AND S16
S19	8	S18 NOT S11
S20	8	IDPAT (sorted in duplicate/non-duplicate order)
S21	8	IDPAT (primary/non-duplicate records only)
S22	54711	S1 AND (GEOGRAPH? OR SPATIAL? OR SPACE OR AREA OR GRAPHIC? OR VISUALI? OR SPACIAL?)
S23	193	S22 AND S2 AND S14
S24	22	S3 AND S4 AND S23
S25	0	S23 AND S6
S26	6	S24 AND IC=(G06F? OR H04L?)
S27	1	S26 NOT (S13 OR S19)

File 347:JAPIO Nov 1976-2004/Aug(Updated 041203)

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File 350:Derwent WPIX 1963-2005/UD,UM &UP=200504

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3/9/1 (Item 1 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
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015597833 \*\*Image available\*\*  
WPI Acc No: 2003-659988/200362  
XRPX Acc No: N03-526278

Machine-readable medium stores data retrieval program to transmit queries  
to corresponding selected proxy server services for transmission to  
target servers

Patent Assignee: AT & T CORP (AMTT ); BYERS S D (BYER-I)

Inventor: BYERS S D

Number of Countries: 002 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20030115185	A1	20030619	US 200122788	A	20011217	200362 B
CA 2413854	A1	20030617	CA 2413854	A	20021210	200362

Priority Applications (No Type Date): US 200122788 A 20011217

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 20030115185	A1	13	G06F-007/00	
CA 2413854	A1 E		G06F-017/30	

Abstract (Basic): US 20030115185 A1

NOVELTY - A set of queries is transmitted to corresponding selected  
proxy server services for transmission to the target servers. A reply  
is received from the target server corresponding to proxy server  
service, for each query.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the  
following:

(1) method for retrieving data accessible by posing queries to  
target server; and

(2) method of configuring client machine connected to network.

USE - Machine-readable medium storing information retrieval program  
for larger scale web access.

ADVANTAGE - Usage of random proxy servers; enables processing of  
large number of queries in parallel, hence minimizes target server  
latency and web traffic delays.

DESCRIPTION OF DRAWING(S) - The figure shows the block diagram  
illustrating the proxy server services selection method.

pp; 13 DwgNo 1/7

Title Terms: MACHINE; READ; MEDIUM; STORAGE; DATA; RETRIEVAL; PROGRAM;  
TRANSMIT; QUERY; CORRESPOND; SELECT; SERVE; SERVICE; TRANSMISSION; TARGET  
; SERVE

Derwent Class: T01; W01

International Patent Class (Main): G06F-007/00 ; G06F-017/30

International Patent Class (Additional): H04L-012/16

File Segment: EPI

Manual Codes (EPI/S-X): T01-N02A3B; T01-N02A3C; T01-S03; W01-A06G



Set	Items	Description
S1	1701418	QUERY OR QUERIES OR SEARCH? OR SEEK? OR FIND OR LOCATE OR - LOCATING
S2	2654592	DATAPoint? OR CENTROID? OR DATA() (CENTER? OR NEXUS OR FOCUS OR FOCII) OR POINT?
S3	2359874	RADIUS OR RADII OR CIRCUMFERENCE? OR DIAMETER? OR BOUNDARY OR BOUNDARIES
S4	5760811	COVERAGE? OR AREA? OR COVERED OR ENCOMPASS? OR ENCIRCL? OR WITHIN OR INSIDE
S5	234859	OVERLAP? OR OVER() (LAP OR LAPS OR LAPPING OR LAY OR LIE OR LYING OR LAYS)
S6	41103	VORONOI OR DIRICHLET OR THIESSEN DELAUNAY
S7	6331903	GEOGRAPH? OR SPATIAL? OR SPACIAL? OR SPACE? OR AREA OR ARE- AS OR GRAPH OR GRAPHS OR VISUALI?
S8	51098	S1(3N)S7
S9	233	S8 AND S2 AND S3 AND (S4 OR S5)
S10	197	S6 AND S8
S11	6	S8 AND S2 AND S3 AND S4 AND S5
S12	7376	S4(3N)S5
S13	1	S9 AND S12
S14	71	S8 AND S12
S15	9	S14 AND (S2 OR S3 OR S6)
S16	3503	S1 AND S2 AND S3 AND S4
S17	1933	S7 AND S16
S18	49	S17 AND S5
S19	119	S18 OR S15 OR S14 OR S11
S20	80	RD (unique items)
S21	64	S20 NOT PY>2001
S22	64	S21 NOT PD=20011217:20031217
S23	64	S22 NOT PD=20031217:20050122
S24	63	S23 NOT CY>2001
S25	63	S24 NOT CD>20011217
File	8: Ei Compendex(R)	1970-2005/Jan W3 (c) 2005 Elsevier Eng. Info. Inc.
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File	434: SciSearch(R)	Cited Ref Sci 1974-1989/Dec (c) 1998 Inst for Sci Info
File	34: SciSearch(R)	Cited Ref Sci 1990-2005/Jan W3 (c) 2005 Inst for Sci Info
File	62: SPIN(R)	1975-2005/Nov W1 (c) 2005 American Institute of Physics
File	99: Wilson Appl. Sci & Tech Abs	1983-2004/Nov (c) 2004 The HW Wilson Co.
File	95: TEME-Technology & Management	1989-2004/Jun W1 (c) 2004 FIZ TECHNIK

25/5/1 (Item 1 from file: 8)  
DIALOG(R)File 8: Ei Compendex(R)  
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06385233 E.I. No: EIP03207472165

Title: Using browsing to improve content-based image retrieval

Author: Jin, Jesse S.; Kurniawati, Ruth; Xu, Guangyu; Bai, Xuesheng

Corporate Source: University of New South Wales, Sydney, NSW 2052, Australia

Conference Title: Multimedia Storage and Archiving Systems III

Conference Location: Boston, MA, United States Conference Date: 19981102-19981104

Sponsor: SPIE

E.I. Conference No.: 60962

Source: Proceedings of SPIE - The International Society for Optical Engineering v 3527 1998. p 101-109

Publication Year: 1998

CODEN: PSISDG ISSN: 0277-786X

Language: English

Document Type: CA; (Conference Article) Treatment: T; (Theoretical)

Journal Announcement: 0305W4

Abstract: Many content-based methods have been proposed to retrieve images from multimedia databases. Current index structures, such as R\*-tree, SS-tree and SS\*\*+-tree, have a large **overlapping area** among their nodes, especially at the high level of the indexing tree. The **overlapping area** causes the **search** engine to compare a large number of nodes and hence, it is very inefficient to retrieve at very high levels of the index tree. We present a scheme to combine browsing with retrieval in searching for images. The browser uses the content-based index structure of image databases. It provides users with a visual tool to narrow the search quickly to a small region and to avoid a large number of comparisons. Combined with retrieval, it produces a very efficient content-based retrieval method. 38 Refs.

Descriptors: \*Content based retrieval; Indexing (of information); Web browsers; Multimedia systems; Query languages; Trees (mathematics); Heuristic methods; Algorithms

Identifiers: Image databases

Classification Codes:

723.2 (Data Processing); 903.1 (Information Sources & Analysis); 723.5 (Computer Applications); 723.3 (Database Systems); 921.4 (Combinatorial Mathematics, Includes Graph Theory, Set Theory)

723 (Computer Software, Data Handling & Applications); 903 (Information Science); 921 (Applied Mathematics)

72 (COMPUTERS & DATA PROCESSING); 90 (ENGINEERING, GENERAL); 92 (ENGINEERING MATHEMATICS)

25/5/7 (Item 7 from file: 8)  
DIALOG(R)File 8:EI Compendex(R)  
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02852571 E.I. Monthly No: EI9002018769

Title: Algorithm for locating candidate labeling boxes within a polygon.

Author: van Roessel, Jan W.

Corporate Source: TGS Technology Inc, Sioux Falls, SD, USA

Source: American Cartographer v 16 n 3 Jul 1989 p 201-209

Publication Year: 1989

CODEN: AMCADV ISSN: 0094-1689

Language: English

Document Type: JA; (Journal Article) Treatment: A; (Applications); G; (General Review)

Journal Announcement: 9002

Abstract: Vector-based **geographic** information systems usually require annotation, such as a polygon number or attribute data, in a suitable location **within** a polygon. Traditional methods usually compute the polygon **centroid**, test the **centroid** for inclusion or exclusion, and select some alternative **point** when the **centroid** falls outside the polygon. Two problems are associated with this approach: (1) the text can be centered on the **point**, but may be placed in a visually awkward place, and (2) part of the text may fall outside the polygon and may **overlap** other polygon **boundaries** or other text labels. An algorithm is presented that circumvents both of these problems, by computing a number of horizontal candidate labeling rectangles (boxes) **within** a polygon from which a suitable selection can be made or from which one may conclude that the text label does not fit the polygon. (Author abstract) 10 Refs.

Descriptors: \*MAPS AND MAPPING--\*Computer Applications; COMPUTER PROGRAMMING--Algorithms

Identifiers: CANDIDATE LABELING BOXES; TEXT BLOCK LABELS

Classification Codes:

405 (Construction Equipment & Methods); 723 (Computer Software)

40 (CIVIL ENGINEERING); 72 (COMPUTERS & DATA PROCESSING)

25/5/9 (Item 9 from file: 8)  
DIALOG(R)File 8: Ei Compendex(R)  
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01445755 E.I. Monthly No: EIM8309-068095

Title: USING GEOGRAPHICAL COORDINATES TO SEARCH BIBLIOGRAPHICAL  
GEOSCIENCE DATABASES.

Author: Farrar, Ralph K.; Lerud, Joanne V. .

Conference Title: Online '82 Conference Proceedings.

Conference Location: Atlanta, Ga, USA Conference Date: 19821101

Sponsor: Online Inc, Weston, Conn, USA

E.I. Conference No.: 02035

Source: Online Conference Proceedings 1982. Publ by Online Inc, Weston,  
Conn, USA p 256-262

Publication Year: 1982

CODEN: OCPRDR

Language: English

Document Type: PA; (Conference Paper)

Journal Announcement: 8309

Descriptors: \*DATABASE SYSTEMS

Identifiers: BIBLIOGRAPHICAL GEOSCIENCE SEARCH ; GEOGRAPHIC TERMS;  
DOCUMENTS INDEXING AND RETRIEVAL; OCEAN AREAS ; GEOGRAPHICAL AREAS  
OVERLAPPING ; CHANGEABLE GEOGRAPHIC NAMES; GEOGRAPHIC COORDINATES;  
COORDINATE SEARCHING VERSUS TERM SEARCHING

Classification Codes:

723 (Computer Software); 901 (Engineering Profession)

72 (COMPUTERS & DATA PROCESSING); 90 (GENERAL ENGINEERING)

25/5/23 (Item 13 from file: 35)  
DIALOG(R)File 35:Dissertation Abs Online  
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01162855 ORDER NO: AAD91-20481

ACCESS TO GEOGRAPHIC CONCEPTS IN ONLINE BIBLIOGRAPHIC FILES: EFFECTIVENESS  
OF CURRENT PRACTICES AND THE POTENTIAL OF A GRAPHIC INTERFACE (INFORMATION  
RETRIEVAL)

Author: HILL, LINDA LADD

Degree: PH.D.

Year: 1990

Corporate Source/Institution: UNIVERSITY OF PITTSBURGH (0178)

Source: VOLUME 52/02-A OF DISSERTATION ABSTRACTS INTERNATIONAL.

PAGE 327. 212 PAGES

Descriptors: INFORMATION SCIENCE; LIBRARY SCIENCE; GEOGRAPHY, SOCIAL

Descriptor Codes: 0723; 0399; 0366

The focus of this research was to determine the accuracy and predictability, and hence the effectiveness, of current practices of indexing geographic concepts for retrieval from online bibliographic files within the domain of earth sciences. The methodology was based on the measurement of geographic similarity between pairs of documents. The geographic study area for each document in a test file of earth science documents was represented in at least three ways: by a map and by the text of bibliographic records from two online bibliographic files. The geographic similarity of the documents to one another was measured spatially using the maps and linguistically using the text, both indexing terminology and free text, under both Boolean and vector retrieval models and with frequency weighting of terms. Correlation analysis of the map-based geographic similarities to the text-based similarities was used to evaluate the effectiveness of geographic representation. Some records also included representation of the geographic concepts with latitude and longitude coordinates which were compared spatially to the map-based representations of the study areas and to the text-based representations. Optimal recall and precision values for three case study areas, using text and coordinates, were also derived, using the **overlap** of map **areas** to define the relevant sets. Results indicate only weak correlations between the text-based and the spatially-based geographic representations (with a range of 0.19 to 0.38), related to the imprecise nature of words in representing geographic areas and to the lack of predictability of the terminology used to describe a particular area. Recall and precision values for optimal search strategies for three case studies exhibited a great range of values (both ranged from 15% to 80%), with average values of 50% recall and 41% precision. Free text performed better than index terms in both correlation values to map-based **geographic** similarities and in **search** strategies; the advantage was based primarily on individual words in the index term phrases.

25/5/30 (Item 3 from file: 2)  
DIALOG(R)File 2:INSPEC  
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6566248 INSPEC Abstract Number: C2000-05-7840-039

Title: **A map mosaicking method using opportunistic search approach with a blackboard structure**

Author(s): Jonghyon Yi; Min Suk Lee; Jaihie Kim

Author Affiliation: Dept. of Electr. & Comput. Eng., Yonsei Univ., Seoul, South Korea

Conference Title: Document Analysis Systems: Theory and Practice. Third IAPR Workshop, DAS'98. Selected Papers (Lecture Notes in Computer Science Vol.1655) p.322-35

Editor(s): Lee, S.-W.; Nakano, Y.

Publisher: Springer-Verlag, Berlin, Germany

Publication Date: 1999 Country of Publication: Germany xi+377 pp.

ISBN: 3 540 66507 2 Material Identity Number: XX-1999-02853

Conference Title: Document Analysis Systems: Theory and Practice. Third IAPR Workshop, DAS'98. Selected Papers

Conference Date: 4-6 Nov. 1998 Conference Location: Nagano, Japan

Language: English Document Type: Conference Paper (PA)

Treatment: Practical (P)

Abstract: Map mosaicking integrates two or more map images having a coincident area by computing the rotational angle and the vertical and horizontal distances that a map image has to move in order to **overlap** the coincident **area**. A solution to the problem is represented as a **point** in a parameter space with three axes: one for the rotational angle and the others for the vertical and horizontal distances. We extract local features from each map image, match them to make feature pairs, and project the feature pairs on to the parameter space. Traditional approaches using parameter spaces have suffered from a huge **search space** and computing time, since they project all the feature pairs on to the parameter **space** and **search** for solutions by iterative optimization methods. We propose a new method that can give a solution, not by projecting all the feature pairs on to the parameter **space** but by **searching** opportunistically in a blackboard structure. (8 Refs)

Subfile: C

Descriptors: blackboard architecture; cartography; document image processing; feature extraction; image registration; search problems

Identifiers: map mosaicking method; opportunistic searching; blackboard structure; map images; coincident area; rotational angle; vertical distance; horizontal distance; map overlapping; parameter space; local feature extraction; feature pairs; feature matching; projection

Class Codes: C7840 (Geography and cartography computing); C5260B (Computer vision and image processing techniques); C6170K (Knowledge engineering techniques); C6130D (Document processing techniques)

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*complete*

25/5/33 (Item 6 from file: 2)

DIALOG(R)File 2:INSPEC

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5902570 INSPEC Abstract Number: C9806-7840-004

Title: A quadtree clustering algorithm for efficient spatial query processing

Author(s): Kim Joo-Hyoung; Hong Bong-Hee

Journal: Journal of KISS(B) (Software and Applications) vol.25, no.1  
p.204-15

Publisher: Korea Inf. Sci. Soc,

Publication Date: Jan. 1998 Country of Publication: South Korea

CODEN: CKNBFBV ISSN: 1226-2285

SICI: 1226-2285(199801)25:1L.204:QCAE;1-U

Material Identity Number: E346-98004

Language: Korean Document Type: Journal Paper (JP)

Treatment: Practical (P)

Abstract: There have been many works for developing spatial indexing and clustering methods for efficiently accessing a large volume of GIS data. To reduce I/O access time, it is necessary to support a clustering of logically related 2 dimensional data on the 1 dimensional disk. The paper presents a novel clustering method on the extended quadtree which does not fragment any spatial object. A number of clustering algorithms based on the gravity of geometry, the reference point of geometry, and the overlap area are devised and evaluated. The result of performance evaluation of this method is shown. (12 Refs)

Subfile: C

Descriptors: geographic information systems; quadtrees; query processing; spatial data structures; visual databases

Identifiers: quadtree clustering algorithm; spatial query processing; spatial indexing; clustering methods; GIS data; I/O access time; logically related 2 dimensional data; 1 dimensional disk; extended quadtree; geometry ; reference point ; overlap area ; performance evaluation

Class Codes: C7840 (Geography and cartography computing); C6160S (Spatial and pictorial databases); C1160 (Combinatorial mathematics); C6120 (File organisation); C7250R (Information retrieval techniques)

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25/5/36 (Item 9 from file: 2)  
DIALOG(R) File 2:INSPEC  
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4859938 INSPEC Abstract Number: C9503-6160S-001

Title: **Modelling topological spatial relations: strategies for query processing**

Author(s): Clementini, E.; Sharma, J.; Egenhofer, M.J.

Author Affiliation: Nat. Center for Geogr. Inf. & Anal., Maine Univ., Orono, ME, USA

Journal: Computers & Graphics vol.18, no.6 p.815-22

Publication Date: Nov.-Dec. 1994 Country of Publication: UK

CODEN: COGRD2 ISSN: 0097-8493

U.S. Copyright Clearance Center Code: 0097-8493/94/\$6.00+.00

Language: English Document Type: Journal Paper (JP)

Treatment: Practical (P)

Abstract: The paper investigates the processing of **spatial queries** with topological constraints, for which current database solutions are inappropriate. Topological relations, such as disjoint, meet, **overlap**, **inside**, and contains, have been well defined by the 9-intersection, a comprehensive model for binary topological relations. We focus on two types of queries: (1) "Which objects have a stated topological relation with a given spatial object?" and (2) "What is the topological relation between two given **spatial** objects?" Such **queries** are processed at two levels of detail. First, minimum bounding rectangles are used as an approximation of the objects' geometry and as a means of identifying candidates that might satisfy the query. Next, the nine intersections that determine the topological relations between candidate pairs are calculated. We present algorithms for minimizing these computations. Considerable performance can be gained by exploiting the semantics of spatial relations. We also compare the approach for a naive cost model, which assumes that all relations have the same frequency of occurrence, with a refined cost model, which considers the probability of occurrence of the topological relations. The strategies presented here have three key benefits: they are based on a well-defined formalism; they are customizable; and they can take into account important statistical information about the data. (24 Refs)

Subfile: C

Descriptors: geographic information systems; query processing; spatial data structures; visual databases

Identifiers: topological spatial relation modelling; query processing; **spatial queries**; topological constraints; 9-intersection; binary topological relations; stated topological relation; spatial object; minimum bounding rectangles; object geometry; candidate pairs; naive cost model; refined cost model; statistical information; customizable; GIS; geographic information systems

Class Codes: C6160S (Spatial and pictorial databases); C6120 (File organisation); C7840 (Geography and cartography computing); C7250R (Information retrieval techniques)

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00883988 \*\*Image available\*\*

CONTINUOUS LOCAL INFORMATION DELIVERY SYSTEM AND METHOD  
SYSTEME FOURNISSANT DES INFORMATIONS LOCALES EN CONTINU ET PROCEDE ASSOCIE  
Inventor(s):

CHAN Jawe, 3072 Baronscourt Way, San Jose, CA 95132, US,

Patent Applicant/Inventor:

CHANG Ting-Mao, 2126 Villanova Road, San Jose, CA 95130, US, US

(Residence), US (Nationality)

Legal Representative:

CHANG Ting-Mao (commercial rep.), 2126 Villanova Road, San Jose, CA 95130  
, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200217141 A2-A3 20020228 (WO 0217141)

Application: WO 2001US26296 20010821 (PCT/WO US0126296)

Priority Application: US 2000227454 20000823

Designated States:

(Protection type is "patent" unless otherwise stated - for applications  
prior to 2004)

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ  
EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR  
LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL  
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(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 14373

Main International Patent Class: G06F-017/30

Fulltext Availability:

Detailed Description

Detailed Description

... automatic positioning system. The search topic of each query is the same, but the search area is moving according to user's position. A circular search area is a good choice...

...at the position of the car or user and the user may pre-select a search radius. Depending on the speed of the car and the radius, two or more continuous search circles may overlap each other.

In Fig 3, a searching task does a search within area 301 and then another search within area 302 after a period of time has passed. The user may receive updated information related to the overlapped area 303 if the information changes between two searches. The preferred embodiment of the present invention can remove the old search results on the overlapped area and update with the latest search results. If the user prefers to keep the old search result, the invention could present all the search results according to the received time of each search result. For example, present the latest...information search quality. In Fig 4, a car is moving out of user-specified search area before the next query returns the search results. It makes the first search at 401...

...area 403, which was missed by both queries. However, too much overlap in the search areas causes too much redundancy and too little search area coverage causes poor search quality. The preferred embodiment of the invention could use a predefined search area system that minimizes the overlap between searches areas, for example pre-selected discrete areas, like malls, continuous square grids, or continuous pentagonal cells. A search task then invokes a search activity when the user approaches or reaches the boundary of the already covered geographic area. Giving each search area in a predefined